

Special Issue

AI Applications in Emergency Response and Fire Safety

Message from the Guest Editors

Emergency response and fire safety are multifaceted problems due to the scale, condition, and complexity of emergency situations in our urban environment, involving high-rise buildings, transportation networks, and wildland–urban interfaces. Leveraging AI holds great potential for safeguarding life and property, as it could be used to analyze enormous amounts of data to identify patterns, predict incidents, and optimize emergency response and recovery. This Special Issue calls for papers discussing AI and machine learning technology applications to hazardous material accidents, transportation fires, building/infrastructure fires, and wildland fires, which concern the following:

- Predictive analytics;
- Enhanced detection, situational awareness, and hazard scoping;
- Automating data processes;
- Optimize response/firefighting/evacuation strategies;
- Supporting/improving decision-making;
- Data management and analysis for risk assessment;
- Smart emergency/fire modeling.

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